

# RS800 Series *III*

## Remote Engine Starting System

### INSTALLATION INSTRUCTIONS

#### PRE-INSTALLATION CONSIDERATIONS

To ease and reduce installation time, we suggest you READ THIS MANUAL and consider the following points before beginning your installation:

**BEFORE BEGINNING**, check all vehicle manufacturer cautions and warnings regarding electrical service (AIR BAGS, ABS BRAKES, ENGINE / BODY COMPUTER AND BATTERY).

**PLAN OUT YOUR INSTALLATION** and determine most suitable locations for all components to be placed. These components include: The module itself, valet/program button, possible extra relays, and antenna/receiver.

**DAMAGE** resulting from incorrect installation or failure to follow guidelines stated in this book will not be covered under warranty and subject to repair or replacement charges.

**USE A VOLT/OHM METER** to test and locate all connections. Test Lights can damage a vehicle's computer systems. Record all color codes of vehicle wiring to be used for reference. This will save time by not having to re-test the same wires over again.

**ADDITIONAL PARTS**, which are not included with this unit, may be needed for your particular vehicle. . These items may include extra relays (Part#CS-402A), and/or Anti-Theft System Bypass modules.

**TECHNICAL SUPPORT: 1-800-998-6880**

Monday - Friday 8:00am - 4:30pm Pacific Time

Web Site: [www.crimestopper.com](http://www.crimestopper.com)

E-mail: [tech-support@crimestopper.com](mailto:tech-support@crimestopper.com)

CRIMESTOPPER SECURITY PRODUCTS, INC.

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REV A 9/2002

This device complies with FCC Rules part 15. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) This device must accept any interference that may be received, including interference that may cause undesired operation. The manufacturer is not responsible for any radio or TV interference caused by unauthorized modifications to this equipment. Such modification could void the user's authority to use the equipment.

## INSTALLATION CAUTIONS & WARNINGS

**\*\*FOR SAFETY REASONS, DO NOT INSTALL THE RS800 in vehicles with MANUAL TRANSMISSIONS.\*\*** If accidentally left in gear, a remote started vehicle could become a self-propelled threat to life and property.

**WARNING:** This system does NOT have engine over-rev protection. Make certain vehicle throttle linkage operates properly and does not stick. A stuck throttle will cause severe engine damage

**DO NOT** extend the RS800 Ignition harness length. Mount the module so that main harness reaches all ignition switch wiring. Extending these wires could result in poor performance.

**DO NOT** route any wiring that may become entangled with brake, and gas pedals, steering column, or any other moving parts in the vehicle.

**DO NOT** exceed the rated output current of any circuit on the Remote start module. Failure to observe this warning will result in damage to the unit not covered under warranty.

**DO NOT** remote start the vehicle in a closed garage. Make sure that the garage door is open or there is adequate ventilation. Failure to observe this rule could result in injury or death from poisonous Carbon Monoxide fumes.

## WIRING INSTRUCTIONS

### **2 PIN PLUG-PROGRAM/OVERRIDE SWITCH:**

This switch is used for programming features, transmitters, valet mode, and must be used to override the Starter Disable (if optional feature installed) in the event of a non-operating remote control.

### **2 PIN PLUG-(OPTIONAL) LED:**

The LED is used as an indicator for Valet, Programming, and for use as security deterrent with the optional ANTI-GRIND/STARTER DISABLE feature installed. Mount in a visible location on the dash or in the console.

### **PIN 1 & 2: YELLOW / YELLOW/WHITE: (-) IGN / (-) ACC OUTPUTS (FOR ADDING RELAYS)**

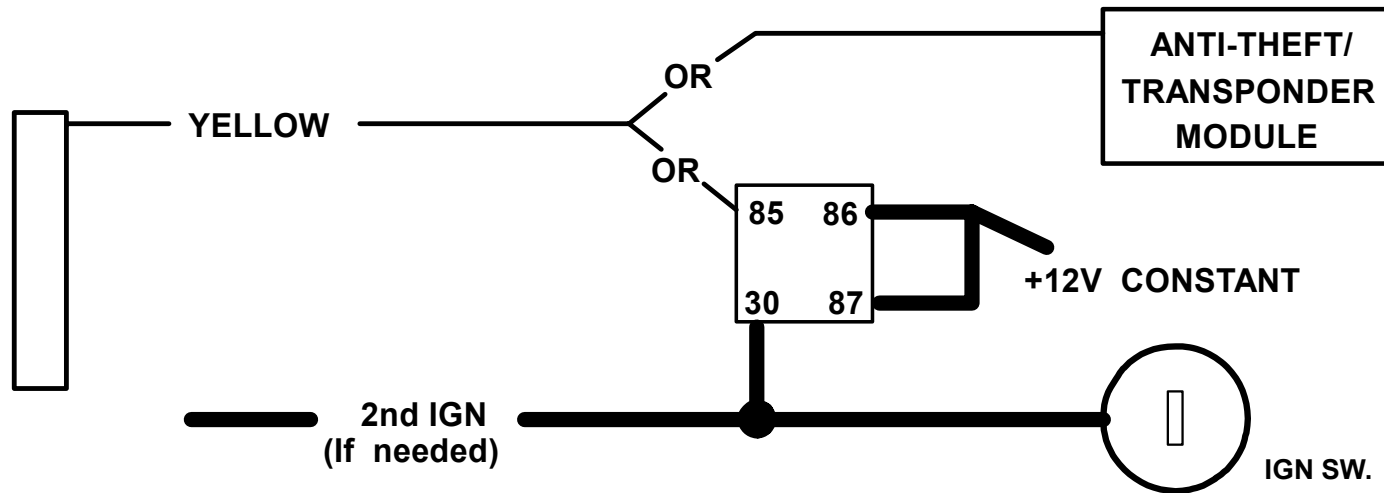
Use these wires when the vehicle requires a second IGNITION or ACCESSORY circuit to be activated. This occurs on Toyota, late GM, and other models of vehicles. This wire is also used to activate ANTI-THEFT or TRANSPONDER Bypass Modules. Connect to the “ground when running” input of the bypass module. (See Diagram on NEXT PAGE.)

### **PIN 3: BLACK: MAIN SYSTEM GROUND**

Connect to chassis metal of the vehicle. An existing bolt or screw MAY provide an adequate ground, or drill a small hole, scrape away paint and attach using a sheet metal screw & star washer. This wire MUST be connected to a good ground or undesirable and inconsistent operation will occur.

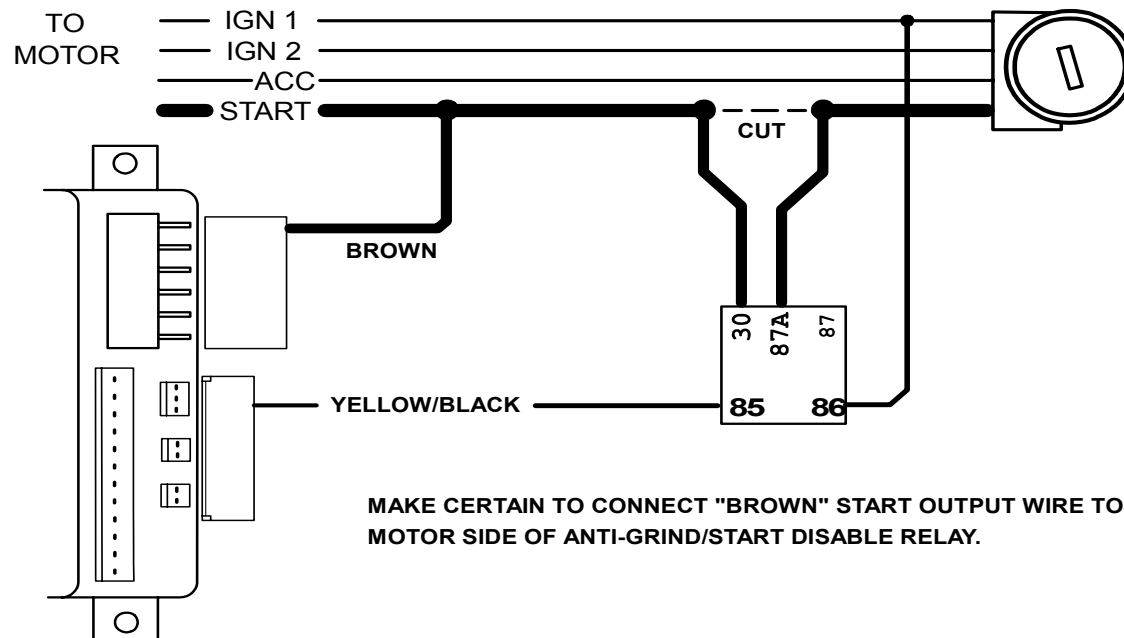
# WIRING INSTRUCTIONS

**YELLOW / YELLOW/WHITE (-) IGN. & (-) ACC. OUTPUTS (GROUND WHEN RUNNING):**



## **PIN 4: YELLOW/BLACK: (-) ANTI-GRIND/STARTER KILL OUTPUT (OPTIONAL)**

Use this wire for the negative side of the Anti-Grind/Starter Disable relay. It can also be used as a sensor disable circuit for a host alarm. This output activates whenever a remote start is requested, and when the vehicle is remotely locked with the transmitter. The output can also be programmed to activate passively. (See diagram)



# WIRING INSTRUCTIONS

## **PIN 5: EMPTY (NOT USED)**

## **PIN 6: GREEN: INSTANT START ACTIVATION BY NEGATIVE (-) TRIGGER INPUT (OPTIONAL ACCESSORY)**

This wire allows the Auxiliary Channel Output of a separate (host) Alarm or Keyless Entry System to activate a Remote Start. This wire can be used for the optional CS400 Cool Start Timed/Temperature controlled interface. A 1 second (-) Negative pulse on the Green wire will trigger/stop a remote start.

## **PIN 7: GRAY: (-) HOOD PIN SWITCH**

Connect the Gray wire to a switch that is at ground when the hood is open. If an existing switch is not available, then one must be installed. When this wire is grounded, the remote start is inhibited. If hood is opened on a remote started engine, the unit will immediately shut the motor off. If hood is open before a remote start unit will not attempt to start engine.

## **PIN 8: PINK: (+12V) DIESEL GLOW PLUG INPUT**

Connect Pink wire to indicator circuit that shows +12 volts while the "WAIT TO START LAMP" is on. When this wire is used, the RS800 Series II will wait until light turns off before attempting a remote start. Note: For vehicles that have a Negative Wait to Start lamp An extra relay may be required.

## **PIN 9: PURPLE: (+12V) BRAKE RESET**

Connect the Purple wire to the side of brake pedal switch that shows +12 volts ONLY when pedal is depressed. This will turn off the remote start if someone attempts to drive the car without the keys or if the Ignition key is not turned on all the way.

## **PIN 10: ORANGE/BLACK: (-) OEM DISARM OUTPUT**

This wire provides a Ground pulse to disarm the vehicles' Factory anti-theft system prior to a Remote Start. Connect this wire to the vehicles' anti-theft disarm wire. This wire is sometimes found coming off the Driver's door key switch or at the Factory Anti-theft control module. This wire may not be needed if Factory Security only requires a door unlock pulse.

## **PIN 11: ORANGE: (-) OEM REARM OUTPUT**

This wire provides a ground pulse to rearm the vehicles' FACTORY anti-theft system after a timed-out or aborted remote start. Connect this wire to the vehicles' anti-theft rearm wire or to the door pin circuit depending on your requirements. This wire may be needed to pulse the door pin circuit on vehicles with retained accessory power.

## **PIN 12: RED/WHITE: TACHOMETER INPUT**

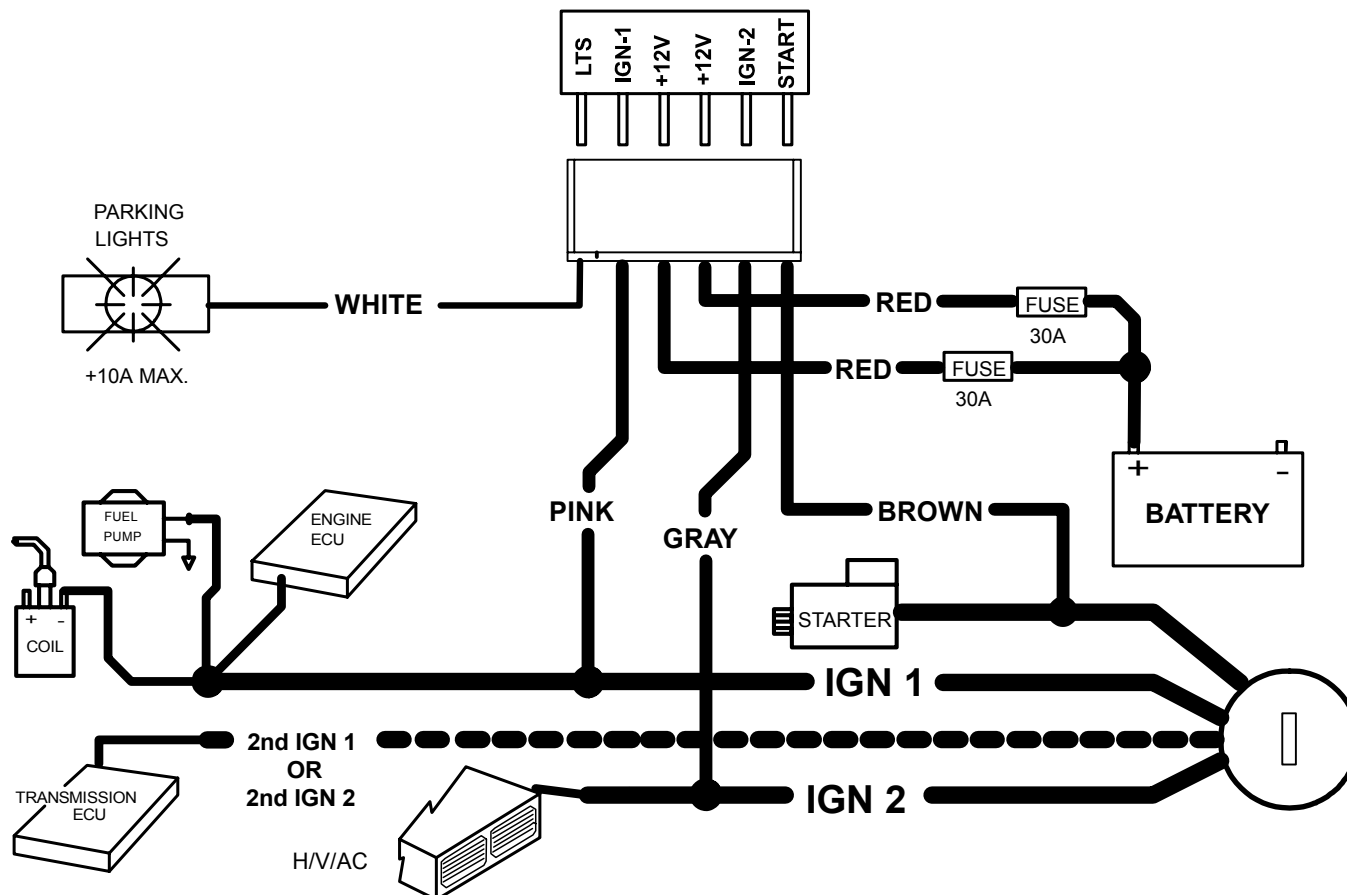
When installing the RS800 in TACH (RPM) REFERENCE mode, this wire must be connected to a valid source of AC voltage. This wire allows the system to sense the engine speed (RPM) and control the starter motor.

# IGNITION SWITCH WIRING

## 6 PIN HIGH-CURRENT CONNECTORS:

<b>PIN 1: BROWN 14 GA.:</b>	<b>STARTER OUTPUT (30A)</b>
<b>PIN 2: GRAY 14 GA.:</b>	<b>ACCESSORY / IGNITION 2 (30A)</b>
<b>PIN 3: RED 14 GA.:</b>	<b>BATTERY CONSTANT FUSED (30A)</b>
<b>PIN 4: RED 14 GA.:</b>	<b>BATTERY CONSTANT FUSED (30A)</b>
<b>PIN 5: PINK 14 GA.:</b>	<b>IGNITION 1 (30A)</b>
<b>PIN 6: WHITE 18 GA.:</b>	<b>(+) PARKING LIGHTS (10A)</b>

**NOTE:** Heavy duty/High Current Ignition circuits greater than 30 AMPS, such as those found on Work or Industrial vehicles, require high-current relays. DO NOT use the outputs of the RS800 Series II for High-Current systems or you will risk damaging the unit and creating a hazardous condition! Use Part #CS-403 relays for circuits up to 70 amps.



# POWER DOOR LOCK WIRING

## 3 PIN DOOR LOCK PLUG:

**PIN 1: GREEN:** (-) Negative pulse for LOCK

**PIN 2: RED:** +12V Coil Power for external relays TERM 86.

**PIN 3: BLUE:** (-) Negative pulse for UNLOCK

**DETERMINING DOOR LOCK TYPE:** We recommend determining the type of locking system the vehicle has before connecting any wires. Incorrect connection will result in damage to the remote start and/or vehicle locking system. There are several types of door lock systems in vehicles today. Below is listed the many types of common locking systems:

**Negative trigger:** Most Japanese; Ford, New GM

**Positive trigger:** Many GM; Some Chrysler

**One wire dual voltage:** Newer Chrys/Dodg/Plym; Ford Probe

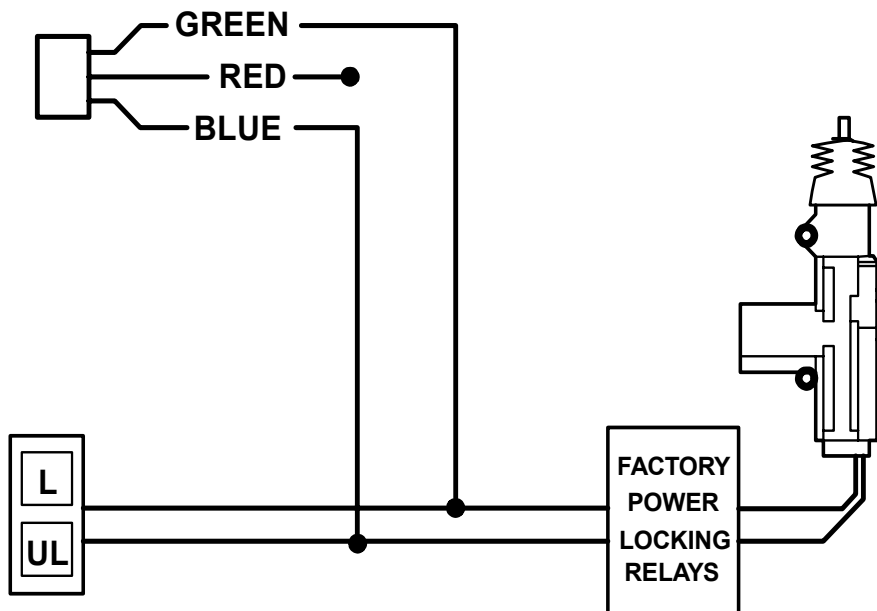
**Reverse Polarity:** Chrys/Dodg/Plym; GM; Ford

**Ground/open:** Some Nissan; Subaru

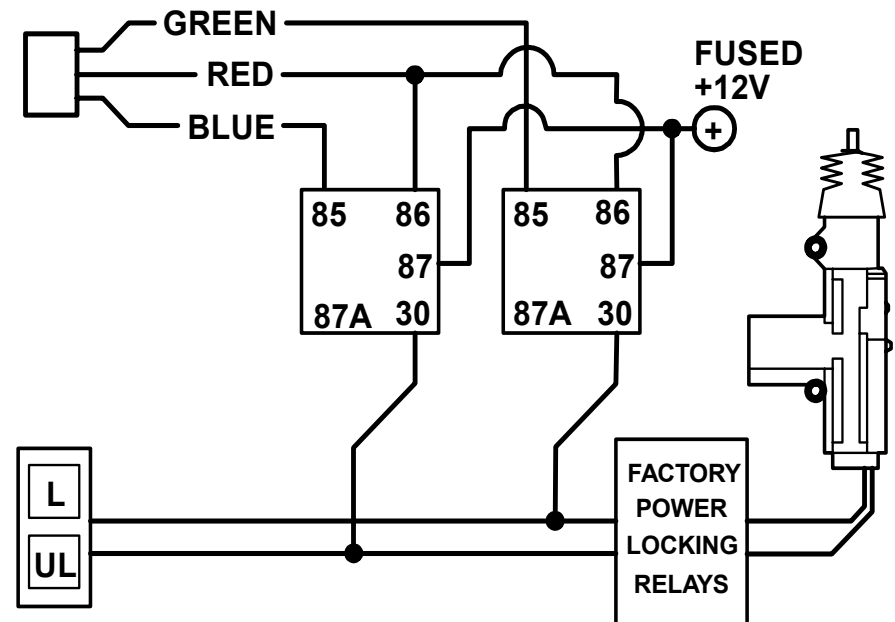
**Semi-automatic:** Older Saab and Volvo

**Electric vacuum pump:** Pre-'95 Mercedes-Benz

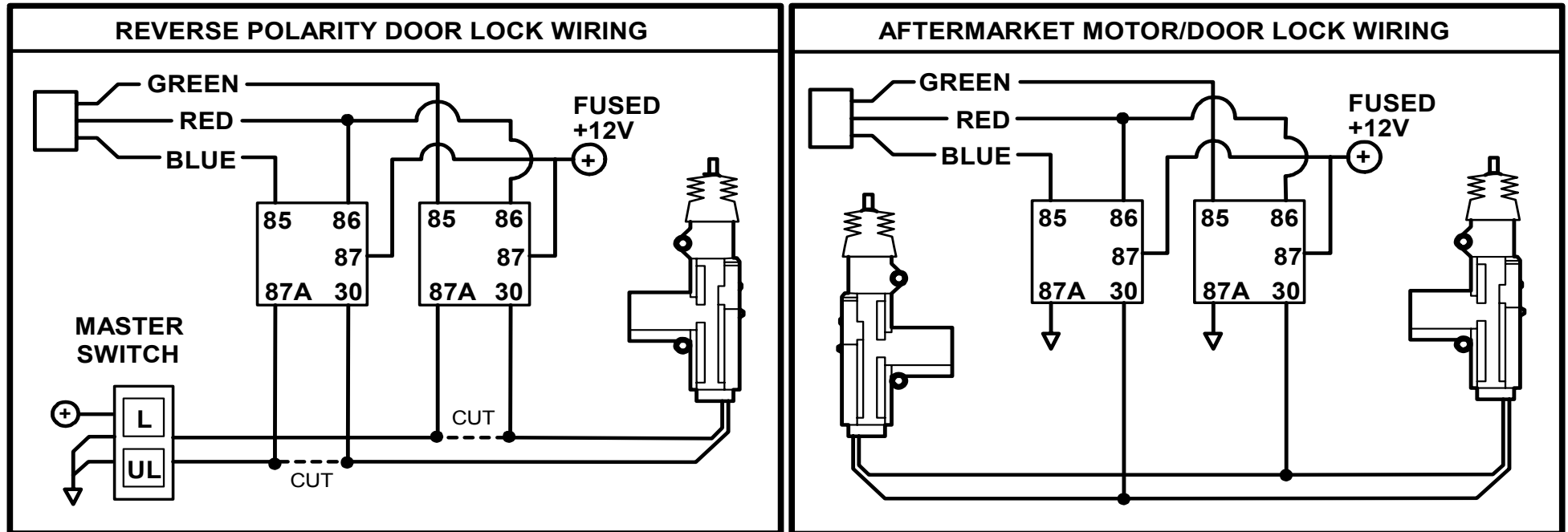
### NEGATIVE TRIGGER DOORLOCK WIRING



### POSITIVE TRIGGER DOORLOCK WIRING



# POWER DOOR LOCK WIRING



## “SMART” TACHLESS MODE

This RS800 system includes a unique voltage monitor system called “Smart Tachless” mode. This mode allows this unit to efficiently start an engine without the use of a tach signal wire. This module actively monitor the voltage reference on the vehicle every time remote start is requested.

**IMPORTANT NOTES:** (1) Setup may be required for the RS800 “Smart Tachless” mode when performing the initial installation. If your vehicle has not been at rest for at least one hour, or has a hot engine, then you must drain the surface charge off of the battery. Unplug the main power harness from the unit, turn the HEADLIGHTS ON for 2-3 minutes to drain off excess charge on the vehicle’s battery, then reconnect.

(2) On the rare occasion that “Smart Tachless” mode does not operate satisfactorily, change the voltage reference level by removing jumpers as described below, or use a verified tach source with the red/white tach wire.

### SMART TACHLESS JUMPERS: (Remove Access Door on top of module)

The purpose of the jumpers is to reduce the starter cranking time [if needed] when in “**Smart Tachless**” mode only.

**JUMPER PIN ORIENTATION:** Looking at remote start upright with harnesses facing down (or towards you).

To shorten the crank time one level, remove the jumper at the far right. Test the unit and see if the decrease is correct. If a shorter crank time is still required, then remove the middle jumper. Test the unit and see if the decrease is correct. There are only (2) adjustments. Removing the third jumper will not make any change to the crank time.

## TACH (RPM) REFERENCE MODE / TACH FINDER MODE / TACH PROGRAMMING

**Tach Reference Mode** provides reliable remote starting performance through engine speed sensing. When using Tach Reference Mode, the Red/White wire is used for Tach signal [Engine RPM] input. Most modern engines include various points where the Engine Speed [Tach] or A/C signal may be obtained. Tach Signal examples: Negative (-) side of ignition coil, at the Distributor or Ignition Control Module, Coil Pack, Engine Computer, or Crankshaft Sensor. Sometimes Fuel injection solenoids, and Alternator stator pins can be used. *These Tach Signal locations mentioned are provided as a guide, your vehicle may differ. Some locations will NOT be a good location for Tach source due to RF noise or Computer Data. TACH FINDER mode will assist you in locating a valid tach source. (See Below.)*

### **TACH FINDER MODE:**

This system now includes a Tach Finder mode to assist in locating a valid or viable tach source for your installation. Follow the Tach Finder steps to locate and /or verify a tach signal. When following the steps, the unit will begin to flash the parking lights if you have the Red/White wire connected to a valid tach source. If lights do not flash, then try another wire until you locate a tach signal that will cause the Parking lights to flash. NOTE: On some vehicles equipped with daytime running lights, it may be difficult to see any flashing parking lights. In this case your only notification will be the slight “ticking” sound coming out of the module from the on-board flashing light relay.

### **TACH FINDER:**

1. Open hood (or ground Gray hood pin wire if no hood pin is installed)
2. Start Engine with the key.
3. Press the Program button for 2 seconds
4. Lights will begin flashing if the Red/White wire is connected to a valid tach source. If not try a different wire until one is located.
5. Once Tach is located then turn off engine and close hood to abort (un-ground Gray wire).
6. See Tach Reference programming.

### **TACH PROGRAMMING:**

1. Open hood (or ground Gray hood pin wire if no safety hood pin is installed.)
2. Red/White wire should be connected to a valid Tach source.
3. Start engine with key.
4. Press program button 5 times, then wait for 5 light flashes.
5. Push program button again 4 times. (You must get a light flash after button is pressed.) This unit is now at option #4-Tach Learning.
6. Press the #2 Start Button on remote transmitter. The unit will read the Tach source and flash the lights twice for program confirmation.
7. If lights do not flash twice for confirmation, then try another tach source or try the tach finder.



## TACH (RPM) REFERENCE MODE / TACH FINDER MODE / TACH PROGRAMMING

**NOTE (1):** The Tach Signal locations on page 8 are provided as a guide, your vehicle may differ. Some locations will NOT be a good location for Tach source due to RF noise or Computer Data. The RS-800 may not detect a clean signal. Of you are unable to locate a Tach Source, call Crimestopper for Tech Support: (800) 998-6880.

**NOTE (2)** The RS800 will operate in “Smart Tachless” Mode [by default] unless a Tach Reference has been programmed. This unit automatically switch out of “Smart Tachless” Mode when Tach is programmed.

## TRANSMITTER PROGRAMMING

**Note:** All transmitter codes must be learned at time of programming!! The RS800 allows storage of up to 4 different transmitter codes.

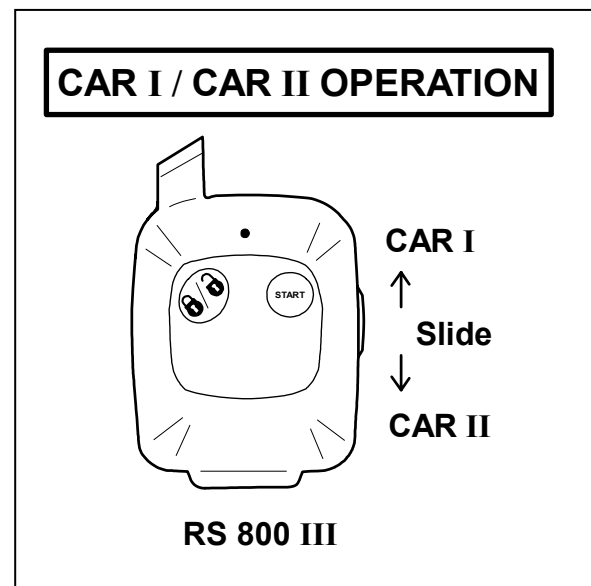
1. Open Hood. (Ground Gray wire.)
2. Turn key to the ON position.
3. Press Programming button 4 times, then after a few seconds the unit will flash the parking lights 4 times.
4. Press button #1 of the transmitter to be coded. You should get 2 light flashes indication the unit is waiting for a 2<sup>nd</sup> code, then press button #1 of a second transmitter, the unit will flash 3 times indicating its waiting for the 3<sup>rd</sup> code and lights will flash 4 times for 4<sup>th</sup> code. If all 4 codes are learned, the unit will automatically exit code learning mode, otherwise turn key OFF and close hood. (See diagram below)

## 2-VEHICLE OPERATION

The RS-800 III system can be used for 2 car operation. A single RS800 III remote can control two independent vehicles with RS800 III systems installed.

### SETUP:

See diagram at right on how to switch the remote for car 2 operation. Once you have switched your remote to Car 2, then follow the transmitter programming steps AT VEHICLE #2 and learn YOUR remote, along with Car 2's existing remotes. Transmitter programming steps are listed above.



# OPTION PROGRAMMING

This system has several installer programmable features as listed in the chart below.

## Option Programming:

1. Open hood (Ground the Gray wire if no hood pin is installed).
2. Turn Key to the ON position
3. Press program button 5 times, after a few seconds the unit will flash the lights 5 times.
4. Push the valet/program button [again] the number of times that corresponds to the option number desired. You should get a light flash after each button press. See chart below.
5. When you reach the desired programming level, Press button #1(Lock) or #2 (Start) to change the option. See the chart below for option values and descriptions. See chart next page.
6. Turn Ignition OFF, Close hood and check for changed features. Change each option individually repeating STEPS 1-5 above.

## OPTIONS CHART

**\* = DEFAULT**

Option #	Option Description	Option Values	Button #1 LOCK	Button #2 START
1	NOT USED	NOT USED		
2	Door Lock Pulse Time	0.75 Sec. (Standard) OR 3.0 Sec. (European Vacuum)	3 Sec.	0.75 Sec.*
3	Double Unlock Pulse	ON or OFF	ON	OFF*
4	Tach Learning	See Tach Reference Programming		Learn Tach
5	Remote Start Engine Run Time	Button #1 = 48 Min. Button #2 = 24 Min.	24 Min.	36 Min*.
6	Option reset	Button #2		Reset ALL Options to Default

## REMOTE START TROUBLESHOOTING

### ***UNIT FLASHES LIGHTS ONCE AND WILL NOT ATTEMPT A START:***

The unit is in Valet mode. Turn IGN ON, press and hold valet/programming button for about 4 seconds until LED goes out. The unit is now out of valet mode and should perform a remote start.

### ***UNIT FLASHES LIGHTS TWICE AND WILL NOT ATTEMPT A START:***

The unit reads a fault at the Brake (Purple wire is active) or the Hood is OPEN (Gray wire grounded). This is a safety feature of the unit. Check installation for faults and make sure hood is closed and latched.

### ***UNIT CRANKS VEHICLE BUT ENGINE NEVER STARTS: (2 parts)***

1. In some vehicles, there may be a Factory anti-theft system that will not allow the engine to run without the key in the ignition. These systems may include Factory Security Modules, GM Passkey®/Passlock®, and RF Transponder systems (Ford P.A.T.S.®). Many late 1990's and later vehicles include some type of Anti-Theft system which may require a bypass module.
2. The vehicle may have more than one Ignition/or Accessory circuit that requires power for the vehicle to start. This is common on some GM/Toyota vehicles.

### ***VEHICLE STARTS BUT CHECK ENGINE LIGHT COMES ON OR ENGINE RUNS BADLY: (2 parts)***

1. Many 1990-UP General Motors cars/trucks require a secondary ignition circuit for the Transmission computer and other on board systems. If the vehicle is started without this wire energized, there may be a "Check Engine" or "Service Engine" light on the dash. This may cause damage if the vehicle is driven in this condition. Be sure to check for and additional WHITE (or sometimes GREEN) Ignition wire on GM cars and trucks.
2. Some Vehicles (Commonly Nissan) require 2 Start (Cranking) circuits for the vehicle to run properly. If this is the case, then an additional relay must be installed (triggered off of the BROWN start output wire). Connected to the Extra start relay output to the extra start wire in the vehicle. Secondary starter wire may be a smaller wire than the primary starter wire.

### ***NO RESPONSE FROM REMOTE TRANSMITTER: (4 Parts)***

1. Check for proper power/ground wiring connections.
2. Check Antenna Module connection. The antenna module included with this system must be plugged in to allow the unit to send/receive signals.
3. The Remote Transmitters may need to be reprogrammed to operate the system. See Transmitter programming.
4. Remote Transmitters may be damaged or need new batteries.

